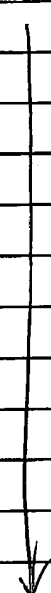



10-29-03

<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  Sheet 1 of 3		Application Number: To be assigned Filing Date: Herewith First Named Inventor: John Holland, et al. Group Art Unit: Unknown Examiner Name: Unknown Attorney Docket Number: 004590 D01				
<b>U. S. PATENT DOCUMENTS</b>						
Examiner Initials	Document No	Publication Date	Name of Patentee or Applicant of Cited Document	Class	Subclass	Filing Date
<i>pk</i> 	US-3,573,840	04-06-1971	GOUILLOU ET AL.	343	895	12-09-1968
	US-4,795,529	01-03-1989	KAWASAKI ET AL.	156	643	10-19-1987
	US-4,842,683	06-27-1989	CHENG ET AL.	156	345	04-25-1988
	US-4,844,775	07-04-1989	KEEBLE	156	643	12-11-1987
	US-4,849,675	07-18-1989	MULLER	315	111.51	07-30-1987
	US-4,872,947	10-10-1989	WANG ET AL.	156	643	10-26-1988
	US-4,922,261	05-01-1990	O'FARRELL	343	742	02-06-1987
	US-4,948,458	08-14-1990	OGLE	156	643	08-14-1989
	US-4,992,665	02-12-1991	MOHL	250	423	11-10-1988
	US-5,122,251	06-16-1992	CAMPBELL ET AL.	204	298.06	02-04-1991
	US-5,194,731	03-16-1993	TURNER	250	281	07-23-1991
	US-5,277,751	01-11-1994	OGLE	156	643	06-18-1992
	US-5,280,154	01-18-1994	CUOMO ET AL.	219	121.52	01-30-1992
<b>FOREIGN PATENT DOCUMENTS</b>						
Examiner Initials	Foreign Patent Document	Publication Date	Country	Name of Patentee or Applicant of Cited Document	Translation? (Yes/No/n/a)	
<i>pk</i> 	GB 2 231 197 A	07.11.90	UNITED KINGDOM	MERVYN DAVIS ET AL.	N/A	
	EP 0 378 828 A2	25.07.90	EUROPE	ISAO ONA ET AL.	N/A	
	EP 0 413 282 A3	20.02.91	EUROPE	JOHN OGLE	N/A	
	EP 0 489 407 A2	10.06.92	EUROPE	KENNETH COLLINS	N/A	
	EP 0 520 519 A1	30.12.92	EUROPE	KENNETH COLLINS ET AL.	N/A	
Examiner Initials	<b>NON PATENT LITERATURE DOCUMENTS</b>					
Examiner's Signature: <i>P. Hassanzadeh</i>   Date Considered: <i>7-7-04</i>						
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<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  Sheet 2 of 3	Application Number: To be assigned Filing Date: Herewith First Named Inventor: John Holland, et al. Group Art Unit: Unknown Examiner Name: Unknown Attorney Docket Number: 004590 D01
--	--

## U. S. PATENT DOCUMENTS

Examiner Initials	Document No	Publication Date	Name of Patentee or Applicant of Cited Document	Class	Subclass	Filing Date
pt	US-5,326,404	07-05-1994	SATO	118	723	12-18-1992
	US-5,346,578	09-13-1994	BENZING ET AL.	156	345	11-04-1992
	US-5,368,710	11-29-1994	CHEN ET AL.	204	192.32	03-29-1993
	US-5,401,350	03-08-1993	PATRICK ET AL.	156	345	03-08-1993
	US-5,540,824	07-30-1996	YIN ET AL.	204	298.34	07-18-1994
	US-5,653,811	08-05-1997	CHAN	118	723	07-19-1995
	US-5,710,486	01-20-1998	YE ET AL.	315	111.21	05-08-1995
	US-5,718,795	02-17-1998	PLAVIDAL ET AL.	156	345	08-21-1995
	US-5,753,044	05-19-1998	HANAWA ET AL.	118	723	02-15-1995
	US-5,874,704	02-23-1999	GATES	219	121.43	06-30-1995
	US-5,907,221	05-25-1999	SATO ET AL.	315	111.51	08-16-1995
	US-5,919,382	07-06-1999	QIAN ET AL.	219	121.52	09-30-1996
	US-6,016,131	01-18-2000	SATO ET AL.	323	895	05-03-1999
	US-6,020,686	02-01-2000	YE ET AL.	315	111.51	08-07-1997

## FOREIGN PATENT DOCUMENTS

Examiner Initials	Foreign Patent Document	Publication Date	Country	Name of Patentee or Applicant of Cited Document	Translation? (Yes/No/n/a)
pt	EP 0 596 551 A1	11.05.94	EUROPE	JEFFREY BENZING ET AL.	N/A
	EP 0 602 764 A1	22.06.94	EUROPE	JAMES HORNSBY ET AL.	N/A
	EP 0 710 055 A1	31.10.94	EUROPE	XUE-YU QIAN ET AL.	N/A
	EP 0 727 807 A1	21.08.96	EUROPE	HIROJI HANAWA ET AL.	N/A
	EP 0 727 923 A1	21.08.96	EUROPE	HIROJI HANAWA	N/A
	EP 0 756 309 A1	29.01.97	EUROPE	KENNETH COLLINS ET AL.	N/A

## NON PATENT LITERATURE DOCUMENTS

Examiner Initials	

Examiner's Signature: *P. Hassanzadeh*

Date Considered: 7-7-04

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10-29-03

<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  Sheet 3 of 3	Application Number: To be assigned Filing Date: Herewith First Named Inventor: John Holland, et al. Group Art Unit: Unknown Examiner Name: Unknown Attorney Docket Number: 004590 D01
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U. S. PATENT DOCUMENTS						
Examiner Initials	Document No	Publication Date	Name of Patentee or Applicant of Cited Document	Class	Subclass	Filing Date
<i>pt</i> ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓	US-6,023,251	02-08-2000	KOO ET AL.	343	700	10-20-1998
	US-6,024,826	02-15-2000	COLLINS ET AL.	156	345	12-23-1996
	US-6,028,285	02-22-2000	KHATER ET AL.	219	121.43	11-19-1997
	US-6,036,878	03-14-2000	COLLINS	216	68	02-13-1998
	US-6,095,083	08-01-2000	RICE ET AL.	118	723	07-14-1997
	US-6,127,275	10-03-2000	FLAMM	438	710	11-30-1999
	US-6,164,241	12-26-2000	CHEN ET AL.	118	723	06-30-1998
	US-6,259,209 B1	07-10-2001	BHARDWAJ ET AL.	315	111.51	09-26-1997
	US-6,280,563 B1	08-28-2001	BALDWIN JR ET AL.	156	345	12-31-1997
	US-6,308,654 B1	10-30-2001	SCHNEIDER ET AL.	118	723	10-18-1996
	US-6,320,320 B1	11-20-2001	BAILEY III ET AL.	315	111.51	11-15-1999
	US-6,444,084 B1	09-03-2002	COLLINS	156	345	01-10-2000
	US-6,507,155 B1	01-14-2003	BARNES ET AL.	315	111.51	04-06-2000

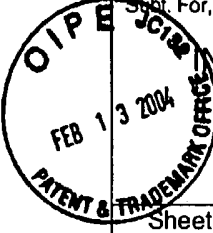
FOREIGN PATENT DOCUMENTS					
Examiner Initials	Foreign Patent Document	Publication Date	Country	Name of Patentee or Applicant of Cited Document	Translation? (Yes/No/n/a)
<i>pt</i> ↓ ↓ ↓	JP 10-149 898 A	27.02.96	JAPAN	YUTAKA NOGAMI	N/A
	WO 91/10341	11.07.91	WIPO	STEPHEN SAVAS	N/A
	WO 92/20833	26.11.92	WIPO	MARK WEISE ET AL.	N/A

Examiner Initials	NON PATENT LITERATURE DOCUMENTS
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Examiner's Signature: <i>P. Hassanzadeh</i>	Date Considered: <i>7-7-04</i>
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2-13-04

	Sheet For, PTO-1449 <b>INFORMATION DISCLOSURE IN AN APPLICATION</b> (Use several sheets if necessary)		Pocket Number <b>110313:135US3</b>	Application Number <b>10/697,893</b>
			Applicant <b>Clapham et al.</b>	
	Sheet <b>1</b>	OF <b>1</b>	Int'l. Filing Date <b>May 3, 2002</b>	Group Art Unit <b>To Be Assigned</b>

U.S. Patent Documents						
EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE

Foreign Patent Documents						
EXAMINER INITIAL	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO

Other Documents (Including Author, Title, Date Pertinent Pages, Etc.)	
A	Arnoult, et al., "Activation of mouse sperm T-type Ca <sup>2+</sup> channels by adhesion to the egg zona pellucida," Proc. Natl. Acad. Sci. USA, Vol. 93, pp. 13004-13009.
B	Bedford, J.M., "Mammalian Fertilization Misread? Sperm Penetration of the Eutherian Zona Pellucida Is Unlikely to be a Lytic Event," Biology of Reproduction, Vol. 59, pp. 1275-1287.
C	Darszon, et al., "Ion Channels in Sperm Physiology," Physiological Reviews, Vol. 79, No. 2, April 1999, pp. 481-510.
D	Hyne and Garbers, "Calcium-dependent increase in adenosine 3', 5'-monophosphate and induction of the acrosome reaction in guinea pig spermatozoa," Proc. Natl. Acad. Sci. USA, Vol. 76, No. 11, pp. 5699-5703.
E	Jungnickel, et al., "Trp2 regulates entry of Ca <sup>2+</sup> into mouse sperm triggered by egg ZP3," Nature Cell Biology, Vol. 3, May 2001, pp. 499-502.
F	O'Toole, et al., "Ca <sup>2+</sup> Entry through Store-operated Channels in Mouse Sperm Is Initiated by Egg ZP3 and Drives the Acrosome Reaction," Molecular Biology of the Cell, Vol. 11, pp. 1571-1584, May 2000.
G	Quill, et al., "A voltage-gated ion channel expressed specifically in spermatozoa," PNAS, Vol. 98, No. 22, 12527-12531.
H	Santi, et al., "A dihydropyridine-sensitive T-type Ca <sup>2+</sup> current is the main Ca <sup>2+</sup> current carrier in mouse primary spermatocytes," American Journal of Physiology, Vol. 271, pp. C1583-93, 1996.
I	Serrano, et al., "Voltage-dependent Ca <sup>2+</sup> channel subunit expression and immunolocalization in mouse spermatogenic cells and sperm," FEBS Letters, 462, pp. 171-176, 1999.
J	Database NCBI, Accession Number BC047442, STRAUSBERG, R., Homo Sapiens, Clone Image. 03 March 2003, pages 1-3, especially pages 2-3.
K	Tash, Joseph S., "Role of the Camp, Calcium, and Protein Phosphorylation in Sperm Motility," Controls of Sperm Motility: Biological and Clinical Aspects, eds. Gagnon, pp. 229-240, 1990.
L	Wassarman, et al., "A profile of fertilization in mammals," Nature Cell Biology, Vol. 3, E59-E64, February 2001.
M	Weyand, et al., "Cloning and functional expression of a cyclic nucleotide-gated channel from mammalian sperm," Nature, Vol. 368, pp. 859-863, April 28 1994.
N	Wennemuth, et al., "Cav2.2 and Cav2.3 (N- and R-type) Ca <sup>2+</sup> Channels in Depolarization-evoked Entry of Ca <sup>2+</sup> into Mouse Sperm," The Journal of Biological Chemistry, Vol. 275, No. 28, pp. 21210-21217, 2000.
O	Wiesner, et al., "Cyclic Nucleotide-gated Channels on the Flagellum Control of Ca <sup>2+</sup> Entry into Sperm," The Journal of Cell Biology, Vol. 142, No. 2, pp. 473-484, 1998.
P	Yanigimachi, R. "Mammalian Fertilization," The Physiology of Reproduction, Second Edition, eds. Knobil and Neill, pp. 189-317, 1994.

EXAMINER	DATE CONSIDERED
EXAMINER: Initial if citation is considered, whether or not citation is in conformance with MPEP § 609: Draw Line through citation if not conformance and not considered. Include copy with next communication to applicant.	

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non-related to 10/697,893